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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/807,407 | 03/24/2004 | Markus Berger | 03100141US | 3867 |
| 52203 | 7590 | 10/10/2006 | EXAMINER | |
| CONTINENTAL TEVES, INC. ONE CONTINENTAL DRIVE AUBURN HILLS, MI 48326-1581 | | | KNABLE, GEOFFREY L | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1733 | |

DATE MAILED: 10/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|------------------------|---------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/807,407 | BERGER ET AL. |
| | Examiner | Art Unit |
| | Geoffrey L. Knable | 1733 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
 - 4a) Of the above claim(s) 6-8 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-5 and 9-20 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 3-24-04.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-5 and 9-20, drawn to a method for producing curved thread reinforced tubular structures, classified in class 156, subclass 169.
- II. Claims 6-8, drawn to a device for the production of curved thread reinforced tubular structures, classified in class 156, subclass 425.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case, the process as claimed can be practiced by another and materially different apparatus such as one in which the mandrels are guided through the deflection element guided by a fixed guide. Further, the apparatus could be used to practice another and materially different process such as forming a straight reinforced elements and/or forming a solid shaft rather than a tubular structure and/or forming a rigid structure rather than a rubber based one.

3. Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.

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4. During a telephone conversation with Gerlinde Nattler on September 22, 2006 a provisional election was made with traverse to prosecute the invention of group I, claims 1-5 and 9-20. Affirmation of this election must be made by applicant in replying to this Office action. Claims 6-8 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

6. Claims 1-5 and 9-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, line 9, no antecedent has been established for "the inner circumference," it further not being entirely clear what this is the circumference of.

Claim 2 is indefinite and confusing, it not being clear what displacement movement is being described. In particular, claim 2 defines displacing "about a position shifted" - if it is "about" a position, this would seem to be describing or requiring a rotational motion around this shifted position - is this what is intended? Further, if not a rotational motion, it is not clear exactly how this displacement movement is defined. For example, is this a displacement from the shifted positions to some other position?

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Clarification is required. Analogous ambiguities are presented by the analogous language in claims 3, 5 and 17.

Additionally, in claim 5, no antecedent has been established for "the guide".

In claim 9, line 4 is indefinite, especially when read in light of claim 11. In particular, assuming that the claim 11 reference to the mandrel being led "eccentrically" is intended to further limit 9, then it is not clear what is meant by or what the scope is of the "offset" referred to in claim 9. In other words, the defining scope of "offset" cannot be readily ascertained for cases other than (i.e. to the extent that it is intended to read on cases other than) an eccentric relationship. Clarification is required.

In claim 14, it seems that "threads" was omitted after "reinforcing" and further, it is unclear what is meant by "vulcanizing" the reinforcing (threads) since presumably the threads are not vulcanizable and there is no reference to a material that would be vulcanizable (e.g. rubber).

The last two lines of claim 20 are indefinite and confusing as it is not clear how the claimed "radius" is defined or even what it is a radius of. Also, no antecedent has been established for "the smaller thread angles" and "the large thread angles"

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 1-5, 9-11, 13, 14, 17 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Grawey (US 3,606,921).

Grawey discloses a method for producing a curved thread reinforced tubular structure in which rubber is applied to a mandrel (e.g. col. 12, lines 42+) followed by winding threads (note col. 16, lines 69-71 refers to "at least one") around the mandrel followed by additional rubber layers (and final vulcanization). Further, as clearly illustrated in fig. 5, the mandrel is led through the winding ring with its guides/deflection elements eccentrically located/offset relative to the mandrel . This reference is therefore considered to anticipate the claims 1, 4, 9, 10, 11 and 14 requirements. As to claims 2, 3, 5 and 17, as already noted, it is not entirely clear what motions are required by these claims, this making it somewhat difficult to compare with the prior art - insofar as the mandrel passes through the ring at a position shifted with respect to a concentric

position, it is not clear at present that the claims clearly define over what is taught by Grawey. As to claims 13 and 19, the structure is curved and the angle would necessarily depend on relative feed speeds and spacings as claimed.

11. Claims 9, 11-14, 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Schlake et al. (US 4,917,318).

Schlake et al. discloses a method for making a curved thread reinforced tubular structure including leading a mandrel (38) through a rotating ring with guides/deflection elements that is eccentrically positioned relative to the mandrel (esp. fig. 2), multiple reinforcing threads (note multiple reinforcement can be wound - e.g. col. 6, lines 53-57 as well as fig. 19) being wound as the mandrel is led therethrough. Further, it is considered that the "annular wire storage magazine 18" can be termed a "creel". This reference is therefore considered to satisfy claims 9 and 11. As to claims 12 and 19, various winding patterns are described that would include plural angles, it being considered that the angles would depend at least in part on a distance over which the guides/deflection elements are from the mandrel as well as obviously the different feed speeds. As to claim 13, the structure is curved, it not being considered that the claims define over this. As to claim 14, as already noted, it is not clear what is meant by vulcanizing in this context, it being considered at present that this simply requires a step of heating to effect a curing - such is however clearly taught by Schlake et al. (col. 8, lines 63+). As to claim 20, it would seem that the smaller gap corresponds to the inner circumference of the structure which would be at a smaller radius and further, includes

windings that at least some of which would be at a smaller angle (note various depictions in fig. 19).

12. Claims 9, 11, 12, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Verbauwhede et al. (US 4,119,748).

Verbauwhede et al. discloses a method for production of thread reinforced tubular structures including a mandrel relatively moved with respect to winding devices in the form of creels/rings (6, 7) with deflection elements/guides 10. Further, at col. 5, lines 41-47, it is indicated that the rings are arranged eccentrically positioned relative to the mandrel. Although in this reference, the mandrel is stationary while the rings move axially, it is submitted that the ordinary artisan would have found it to have been an obvious alternative to move the mandrel instead through the rings for only the expected results, it being well known in the filament winding art to move then mandrel. As to forming structures having a curvature, it is noted that Verbauwhede et al. indicates that the articles formed may have "any desired form" (col. 3, lines 49+), it being considered that the artisan would have understood that reinforced pipes are often needed in curved (e.g. elbow, etc.) form and found it obvious to form such. As to claims 12 and 19, it would seem that the angles necessarily would depend upon the speed and distances as claimed. As to claim 18, it is taken that forming tubular shaped preforms by continuous extrusion is extremely well known, it being considered obvious to preform at least the inner part of the pipe to be reinforced as in Verbauwhede et al. using extrusion.

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13. Claims 15 and 16 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The closest prior art does not suggest varying the offset lead through as required by these claims.

14. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Geoffrey L. Knable whose telephone number is 571-272-1220. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Geoffrey L. Knable
Primary Examiner
Art Unit 1733

G. Knable
October 1, 2006